BATUSOV, Yu.A.; BUNYATOV, S.A.; SIDOROV, V.M.; YARBA, V.A.

The $\pi^- p \rightarrow \pi^+ \pi^-$ n reaction near the threshold, and $\pi \pi$ -interaction. IAd. fiz. 1 no.4:687-692 Ap '65.     (MIRA 18:5)

1. Ob"yedinennyy institut yadernykh issledovaniy.

BATUSOV, Yu.A.; BYNYATOV, S.A.; SIDOROV, V.M.; YARBA, V.A.

Total cross sections of the $\pi^- + p \rightarrow \pi^- + \pi^- + n$ reaction near the threshold and the angular distributions of secondary particles. IAd. fiz. 1 no.3:526-532 Mr '65.                    (MIRA 18:5)

1. Ob"yedinennyy institut yadernykh issledovaniy.

BATUSOV, Yu.A.; BUNYATOV, S.A.; SIDOROV, V.M.; YARBA, V.A.

Double charge-exchange of $\pi^+$-mesons. Zhur. eksp. i teor. fiz.
46 no.2:817-818 F '64.                                    (MIRA 17:9)

1. Ob"yedinennyy institut yadernykh issledovaniy.

YARAVINSKIY, L. M.; LYUBAVSKIY, K. V.; TIMOFEYEV, M. M.; BAZHENOV, V. V.

"Le soudage des aciers austenitiques et perlitiques resistant a haute temperature dans les centrales d'energie."

report submitted for 17th Annual Assembly, Intl Inst of Welding, Prague, Jul 64.

YARBUS, A.L.

Re-evaluation of the upper part of figures. Probl. fiziol. opt.
no.10:134-140 '52.                                    (MLRA 7:11)

1. Laboratoriya biofiziki, izotopov i izlucheniy pri Otdelenii
biologicheskikh nauk AN SSSR. Sektor psikhologii In-ta filosofii
AN SSSR. Zav. Laboratoriyey prof. A.M.Kuzin. Rukovoditel' gruppy
chlen-korr. AN i AMN SSSR S.V.Kravkov [deceased]
        (PERCEPTION,
            visual illusion, re-evaluation of upper part of figures)
        (READING
            illusions, re-evaluation of upper part of figures)

YARBUS, A. L.

USSR/Biophysics

Card         :   1/1

Authors      :   Yarbus, A. L.

Title        :   Study of laws governing the movements of eyes during vision

Periodical   :   Dokl. AN SSSR, 96, Ed. 4, 733 - 735, June 1954

Abstract      :   Describes the behavior of the human eyes during observation
of an object (moving or fixed) and a method of studying such
behavior. Drawings.

Institution  :   Acad. of Sc. USSR, Institute of Biological Physics

Presented by:  Academician G. S. Landsberg, March 6, 1954

Translation D 111262, 4 Nov 54

Yarbus, A.L.

USSR/Optics - Physiological Optics, K-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35927

Author: Yarbus, A. L.

Institution: None

Title: Motion of Eyes of Achromates

Original
Periodical: Tr. in-ta biol. fiz. AN SSSR, 1955, 1, 160-171

Abstract: Records are given of the motion of the eyes of trichromates and achromates during the process of fixation end following. The general characters of the motion of the eyes of achromates is the same as that of trichromates. The motion of the eyes of achromates during the process of fixation of stationary objects is accompanied by nystagmus. The magnitude of the nystagmus fluctuates from several tens of angular minutes to 2°. The frequency of the nystagmus is 5 ⚊8/sec. When following a moving object the nystagmus of the eyes in achromates remains and is absent only in the process of changing the fixation points.

Card 1/1

Yarbus, A. L.

USSR/Optics - Physiological Optics, K-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35928

Author: Yarbus, A. L., Gol'tsman, N. I.

Institution: None

Title: Motion of Eyes During the Perception of Images in Three-Dimensional Movies

Original
Periodical: Tr. In-ta biol. fiz., AN SSSR, 1955, 1, 172-177

Abstract: Records are given of motion of the eyes during the perception of stereo-images and stereo films. The records show that the motion of the eyes during the perception of 3-dimensional are analogous to the motions of the eyes during the perception of real objects, i.e., processes of fixations, of the shifts in the fixation points ("jumps"), following, convergence, and divergence of the eye, all take place.

Card 1/1

YARBUS, A.L.

K

USSR/Optics

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10603

Author  : Yarbus. A.L.
Inst    : Not Given
Title   : Concerning the Visual Estimate of Distances.

Orig Pub: Sb. posvyashchennyy pamyati akad. P.P. Lazarev, M. AN SSSR,
          1956, 341-343

Abstract: Clarification of the relation between the "jumps" of the eye
          during the process of estimating distance in a plane and the per-
          ceived magnitude of this distance. The motions of the eye were
          recorded by means of a beam of light, reflected from a small
          mirror attached to the eye. The greater the "jumps" of the eyes
          during the estimate, the greater the perceived distance. When
          equal sections are perceived as different objectives (in the per-
          ception of optical illusions), the "jumps" of the eye are also
          different. The angles of rotation of the eye ("jumps") during
          the process of the estimate and comparison of distances on a

Card    : 1/2

USSR/Optics                                                    K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10603

         plane can serve as objective indices of what is the estimated
         distance as perceived by the observer.

Card    : 2/2

K-9

Category : USSR/Optics - Physiological optics

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2591

Author   : Yarbus, A.L.
Inst     : Inst. of Biol. Physics, Academy of Sciences, Moscow USSR
Title    : Movement of Eyes During the Change in the Fixation Points

Orig Pub : Biofizika, 1956, 1, No 1, 76-78

Abstract : A beam of light reflected from a mirror fastened to the eye recorded the
movement of the eye on light-sensitive paper, moving at a speed of 5 m/sec.
The direction of motion of the light-sensitive paper was perpendicular to the
direction of motion of the eye. The dependence of the duration of the shift
in the fixation point ("jumps" of the eye) on the size of the "jump" was found
to be $T = 0.021 \alpha_0^{2/5}$, where T is the duration of the "jump" in seconds and
$\alpha_0$ the angle in degrees. Records of all "jumps" are quite close to sine curves.
This makes it possible to write down an equation for the dependence of the
angle of turn on the time during the "jump process": $\alpha = \alpha_0 /(21 - \cos \pi /Tt )$,
where t is the time in seconds $(0 \leqslant t \leqslant T)$, and $\alpha$ the angle of turn of the
eye during the "jump" in degrees $(0 \leqslant \alpha \leqslant \alpha_0)$. The equation makes it possible
to compute the position, speed, acceleration and force acting on the eye dur-
in the process of change in the fixation points. The duration of the "jump"
is a function of the angle through which the eye moved during the change in
fixation point, and normally is independent of anything else.

Card     : 1/1

YARBUS, A.L.

Plethysmography of the eyeball. Biofizika 1 no.3:242-244 '56.

(MIRA 9:9)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
    (PLETHYSMOGRAPH)     (EYE)

YARBUS, A.L.

USSR/Human and Animal Physiology - Sense Organs.                    R-13

Abs Jour   : Referat Zhur - Biologiya, No 16, 1957, 71221

Author     : Yarbus, A.L.
Inst       :
Title      : The Perception of a Non-Moving Retinal Image.

Orig Pub   : Biofisika, 1956, 1, No 5, 435-437

Abstract   : The action of light on any part of the retina changes
             the state of that part, in consequence of which there
             is a change in the visible color. The study of this
             factor was complicated by some movement of the image
             on the retina due to the movement of the eyes. The
             author worked out a method with the aid of which one
             can project on the retina images, remaining immobile
             regardless of the movement of eyes in either direction.
             The test was conducted with a special attachment to the
             eye-ball, which moved with it. With the aid of a lense
             with a focal length of 3 mm and a small movable tube

Card 1/2                          - 156 -

USSR/Human and Animal Physiology - Sense Organs.

R-13

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71221

the test image located at the end of the tube, was focused on the retina within 1-15 degrees limit. The illumination of the test was 5000 c. Distortions due to spherical aberration and changes of accomodation of the crystal, were removed by a diaphragm. The image thus immobilized, was only perceived for a few seconds. A slight displacement of the retina made it again visible. If the image fluctuated slightly or was illuminated intermittently, then it did not disappear, but at frequencies which produced continuity of blinking it again disappeared.

*Inst. Biol. Fiziki AN SSR, Moskva*

Card 2/2

- 157 -

K

USSR/Optics

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10589

Author  : Yarbus, A.L.
Inst    : Institute of Biological Physics, Academy of Sciences, USSR,
          Moscow
Title   : Velocity of Motion of Image of a Stationary Point on the Retina
          During the Fixation Process.

Orig Pub: Biofizika, 1956, 1, No 6, 593-596

Abstract: A beam of light, reflected from a small mirror attached to the
          sclerotic coat of the glass, a record was made of the motion of
          the eyes during the fixation process. The images of the station-
          ary point on the retinae of the two eyes shift asynchronously
          and in a disorderly manner in the vicinity of the center of the
          fovea, and the boundaries of the above region are smaller in their
          dimensions than the foveal portion of the retina and are inside it.
          The eyes carry out continuous vibrational motions, whose amplitudes

Card    : 1/2

USSR/Optics

K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10589

are 20'' -- 40'', and the frequency is 80-90 per second. During
the process of these vibrations, the axis of the eye moves over
conical surfaces, running over each such surface approximately
within 0.011 -- 0.013 seconds. If we neglect these vibrations,
then on the average during the fixation process the image of
the stationary point in the foveal portion moves with a velocity
six minutes per second, averaged over one second and the maximum
velocity is 30 minutes per second averaged over one second.

*Inst. Bul. Fiziki Akad. Nauk SSSR, Moskva.*

Card   : 2/2

USSR/Human and Animal Physiology (Normal and Pathological).          T-11
        Sense Organ. Vision.

Abs Jour    :  Ref Zhur - Biol., No 16, 1958, 75198

Author      :  Yarbus, A.L.
Inst        :  -
Title       :  New Method of Recording Eye Movements.

Orig Pub    :  Biofizika, 1956, 1, No 8, 713-720


Abstract    :  Detail presentation of methods for recording eye movements
               by means of a mirror on a rubber capsule which adheres to
               the conjunctive of the sclera of eye globe is given. This
               method was used by the author for several years. Descrip-
               tion is given of three disc cups and the method of their
               preparation. Basic distortions and mistakes are examined
               which can appear during registration of eye movements by
               means of a flat mirror.  --- Yo.M. Belostotskiy.


Card 1/1

(L.)

YARBUS, A., kandidat filosofskikh nauk.

Do you know that your sight is like the electron beam of the
kinescope. Tekh.mol. 24 no.5:32 My '56.                (MLRA 9:8)
        (Optics, Physiological)

YARBUS, A.L.

New method of studying the work of different parts of the retina
[with summary in English]. Biofizika 2 no.2:163-165 '57.

(MLRA 10:6)

1. Institut biologicheskoy fiziki Akademii nauk SSSR, Moskva.
(RETINA)

YARBUS, A.L.

Movements of the eye during spatial shifts of stationary fixation points [with summary in English]. Biofizika 2 no.6:698-702 '57.

(MIRA 10:12)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(EYE--MOVEMENTS)

YARBUS, A. L.

Perception of images fixed in relation to the retina [with summary in
English]. Biofizika 2 no.6:703-712 '57.                    (MIRA 10:12)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
                              (SIGHT)

YARBUS, A.L.

Perception of images moving on the retina at a given rate. Biofizika,
4 no.3:320-326 '59.                              (MIRA 12:7)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
        (RETINA, physiol.
            perception of images moving on the retina at a given rate.
        (VISION, physiol.
            same)

YARBUS, A.L.

Role of ocular movements in the process of vision.  Biofizika 4
no. 6:757-758 '59.                                        (MIRA 14:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
                    (EYE—MOVEMENTS)

YARBUS, A.L.

Perception of images of variable brightness motionless in relation
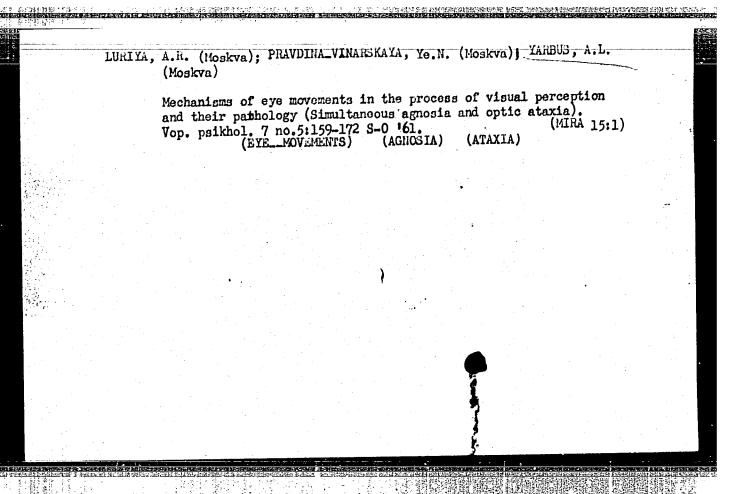to the retina.  Biofizika 5 no. 2:158-161 '60.          (MIRA 14:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
                    (VISUAL DISCRIMINATION)

YARBUS, A.L.

Perception of very bright images motionless in rolation to the
retina.  Biofizika 5 no.3:293-294 '60.                    (MIRA 13:7)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
                    (VISION)

YARBUS, A.L.

Eye movements during the examination of complex objects.  Biofizika
6 no. 2:207-212 '61.                                    (MIRA 14:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
                    (EYE-MOVEMENTS)

LURIYA, A.R. (Moskva); PRAVDINA-VINARSKAYA, Ye.N. (Moskva); YARBUS, A.L. (Moskva)

Mechanisms of eye movements in the process of visual perception and their pathology (Simultaneous agnosia and optic ataxia).
Vop. psikhol. 7 no.5:159-172 S-O '61.                         (MIRA 15:1)
          (EYE-MOVEMENTS)    (AGNOSIA)    (ATAXIA)

YARBUS, A.L.

Eye movements during the perception of moving objects.  Biofizika 7 no.1:
64-69 '62.                                                        (MIRA 15:5)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
        (VISION)     (EYE—MOVEMENTS)

YARBUS, A.L.

Some experiments with an image which is motionless in rela-
tion to the retina. Biofizika, 7 no.2:207-210'62.(MIRA 16:8)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
     (VISION RESEARCH)   (RETINA)

YARBUS, A.L.

Perception of images stationary with regard to the retina and
changing with regard to color.  Biofizika 7 no.3:333-335 '62.
(MIRA 15:8)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(COLOR SENSE)

YARBUS, A.I.

Perception of flashing images stationary in relation to the
retina. Biofizika 7 no.5:615-618 '62.            (MIRA 17:8)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

YARBUS, Al'fred Luk'yanovich; NYUBERG, N.D., prof., doktor
fiz.-matem. nauk, otv. red.; SELETSKAYA, L.I., red.

[Role of eye movements in the process of vision] Rol'
dvizhenii glaz v protsesse zreniia. Moskva, Nauka, 1965.
165 p.                                           (MIRA 18:6)

LURIYA, A.R. (Moskva); KARPOV, B.A. (Moskva); YARBUS, A.L. (Moskva)

Disorders in the perception of complex visual objects under the influence of lesions of the frontal lobes. Vop. psikhol. 11 no.3:45-54 My-Je '65.                                                          (MIRA 18:7)

YARCHENKO, K.I., doktor biol.nauk

In defense of the cotton plant.  IUn. nat.  no.12:9-11  D '60.
(MIRA 14:3)

(Uzbekistan—Cotton—Diseases and pests)
(Insects, Injurious and beneficial)

YARCHENKO, L.M.

New Kegichevka gas field. Geol. zhur. 24 no.1:102-103 '64.   (MIRA 18:7)

1. Starshiy geolog otdela geologii goryuchikh poleznykh iskopayemykh
Glavnogo upravleniya geologii okhrany nedr pri Sovete Ministrov UkrSSR.

BLIZNYUK, V.F.; GAVRISH, V.K.; GRITSAY, Ye.T.; KEL'BAS, B.I.; KLITOCHENKO, I.F.;
        MARTYNOV, A.A.; PALIY, A.M.; POPOV, V.S.; SHAYKIN, I.M.; YARCHENKO, L.M.

Stratigraphic boundaries and oil and gas potentials of the
Upper Cretaceous sediments in the Dnieper-Donets Lowland.
Geol. nefti i gaza 8 no.4:28-35  Ap '64.          (MIRA 17:6)

1. Glavnoye upravleniye geologii i okhrany nedr pri Sovete
Ministrov UkrSSR, Kiyevskaya ekspeditsiya tresta Ukregeofizrazvedka,
Kiyevskaya ekspeditsiya Ukrainskogo nauchno-issledovatel'skogo
geologorazvedochnogo instituta i Chernigovskaya ekspeditsiya
Ukrainskogo nauchno-issledovatel'skogo geologorazvedochnogo
instituta.

ARSIRIY, Yu.A.; BLANK, M.I.; BLIZNYUK, V.F.; GLUSHKO, V.V.;
    KLITOCHENKO, I.F.; LITVINOV, V.R.; PALIY, A.M.; PAN'KIV, A.M.;
    PISTRAK, R.M.; CHERPAK, S.Ye.; CHIRVINSKAYA, M.V.; YARCHENKO, L.M.

Plan for the areal study of the Dnieper-Donets Lowland.   Trudy
VNIIGAZ no.14:3-17 '62.                                   (MIRA 15:5)
        (Dnieper-Donets Lowland—Petroleum geology)
        (Dnieper-Donets Lowland—Gas, Natural—Geology)

YARCHEVSKAYA, S. I.,(Kiyev, ul. Tel'mana, d. 7, kv. 2a)

Clinical significance of cytological studies in diagnosing lung
cancer. Nov. khir. arkh. no.2:10-16  '62.

(MIRA 15:2)

1. Klinika torakal'noy khirurgii (zav. - prof. N. M. Amosov)
Ukrainskogo instituta tuberkuleza.

(LUNGS--CANCER)   (DIAGNOSIS, CYTOLOGIC)

YARCHUK, A., podpolkovnik, voyennyy letchik pervogo klassa

Flights form a training school.  Av. i kosm. no.2:55-59 F '66.
(MIRA 19:1)

VEYGEL'T, B.M., inzhener; YARCHUK, A.Ya., assistant.

Improved type PKN-6 arresters. Avtom.telem.i sviaz' no.8:18
Ag '57.

1."Giprotranssignalsvyaz'" (for Veygel't)
2.Kafedra Elektrotekhniki Leningradskogo instituta inzhenerov
zheleznodorozhnogo transporta.     (Lightning protection)

YARCHUK, A.Ya.

DUNENKOV, V.L.; NEKRASOV, V.I.; PLAKS, A.V.; SHELESHKOV, K.K.; YARCHUK, A.Ya.
(Leningrad)

Investigation of some parts of the electric equipment of N8
electric locomotives. Elek.i tepl.tiaga no.10:18-19 O '57.
(MIRA 10:11)

(Electric locomotives)

YARCHUK, A. Ya.

21(5)

SOV/112-59-5-9110

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, p 100 (USSR)

AUTHOR: Dumenkov, V. L., Nekrasov, V. I., Flaks, A. V., Shelushkov, K. K., and Yarchuk, A. Ya.

TITLE: Investigation of Electrical Equipment of Type N8 Electric Locomotive

PERIODICAL: Sb. Lningr. in-ta inzh. zh.-d. transp., 1957, Nr 155, pp 29-44

ABSTRACT: To introduce final corrections, the scheme of a type N8 electric locomotive had been tested under various conditions before serial manufacturing of the locomotive was started. Under regenerative braking conditions, the current reached 2,000 Amp. On the section where the sub-stations had no inverter equipment, the contact-wire voltage reached 4,200 v, with NB-406 traction motors operating normally. Investigation of the transients accompanying the transition to series connection showed that sometimes, under regenerative conditions, the residual EMF of traction motors is so combined with the contact-wire voltage that voltage up to 5,100-6,000 v appear on the motor brushes. This caused flashovers from energized motor parts and

Card 1/2

equipment to ground. To eliminate such overvoltages, it was suggested that the motors next to ground be short-circuited. To eliminate burning of contacts of the braking switch under transient conditions, it was recommended that two contactors be used for breaking the traction-motor field circuit when regeneration is cut off. Tests of a new laminated-core D-4 relay showed that it provides a satisfactory differential protection of the power circuit. Buffer protection, under traction conditions, is realized by introducing starting resistors; its operating time is 0.1-0.2 sec, the motor current being reduced to one-third of its value. Investigation of the functioning of the protective system under regenerative conditions permitted setting a course for solving this important problem. Forced ventilation is recommended for improving the operating conditions of "tokhatal" resistors. Detailed investigations of air exchange within the locomotive body permitted providing some recommendations as how to improve the ventilating system. Bibliography: 3 items.

V.N.K.

Card 2/2

PLAKS, A.V.,inzh.; YARCHUK, A.Ya.,inzh.

Comparison of brake paths in using rheostat and auxiliary
locomotive brakes. Sbor.LIIZHT no.159:106-111 '58.
(MIRA 12:2)

(Electric railroads--Brakes)

TABACHINSKIY, V.F., kand.tekhn.nauk, dotsent; NOVIKOV, Mikhail Nikolayovich,
        aspirant; YARCHUK, Andrey Yakovlevich, assistent;
        ZAV'YALOV, Valeriy Aleksandrovich, starshiy laborant

Experimental study of the electrical strength of the insulation
of the rotor windings of electric traction motors. Izv. vys.
uchob. zav.; olektromekh. 3 no.9:147-148 '60.        (MIRA 15:5)

1.  Zaveduyushchiy kafedroy teoroticheskikh osnov olektrotekhniki
Leningradskogo instituta inzhenerov zheleznodorozhnogo transporta.
(for Tabachinskiy).  2.  Kafedra elektricheskikh mashin Leningrad-
skogo instituta inzhenerov zheleznodorozhnogo transporta (for
Novikov).  3.  Kafedra teoroticheskikh osnov elektrotekhniki
Leningradskogo instituta inzhenerov zheleznodorozhnogo transporta
(for Yarchuk).  4.  Leningradskiy institut inzhenerov zheleznodo-
rozhnogo transporta (for Zav'yalov).
                      (Electric railway motors)
            (Electric insulators and insulation—Testing)

YARCHUK, A.Ya., inzh.; ZINCHENKO, S.A., inzh.

Model of an electric traction motor in pulsed operation. Sbor. trud.
LIIZHT no.205:121-131  '63.                                    (MIRA 18:1)

YARCHUK, I.I.

USSR/Soil Science. Organic Fertilizers

J-6

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91477

Author   : Khristeva L.A., Yarchuk I.I., Kuz'ko M.A.
Inst     : Kharkov Univ.
Title    : Physiological Principles in the Technology of Humus Fertilizers.

Orig Pub : V sb.: Guminovyye udobreniya. Khar'kov, Khar'kovsk. un-t, 1957, 163-184

Abstract : No abstract

Card     : 1/1

36

M

Country : USSR
Category: Cultivated Plants. Grains.

Abs Jour: RZhBiol., No 22, 1958, No 100260

Author   : Yarchuk, I.I.; Ronsal', G.A.; Kukharevskiy, G.V.
Inst     : Khar'kov University
Title    : Effectiveness of Humic Fertilizers Upon Application
           Under Corn in the South of Ukraine.

Orig Pub: V. sb.: Guminovyye udobreniya. Khar'kov, Khar'kovsk.
          un-t, 1957, 237-244

Abstract: Experiments were conducted on the chestnut and
          sandy soils in the south of Ukraine with the
          application in clusters under corn of humophos,
          humus and $P_c$, peat, and granular commercial Pc
          and $N_a$. Application of organic-mineral humic

Card     : 1/2

M-38

Country. : USSR                                                    M
Category: Cultivated Plants. Grains.

Abs Jour: RZhBiol., No 22, 1958, No 100260

        fertilizers (humophos) is the most effective
        means of raising the corn yield in comparison
        with mineralfertilizers.  With the application
        of humic fertilizers, not only the quantitative
        yield of corn is increased but its quality
        also changes in the direction of an increased
        yield of protein from 1 hectare, and of other
        valuable nutrients.  Application of humic
        fertilizers reduces the gap between the blos-
        soming of the male and female flowers which
        is important for the normal pollination of the
        plants. -- Ye. I. Saks

Card     : 2/2

COUNTRY      :  USSR                                          M
CATEGORY     :  Cultivated Plants. Potatoes. Vegetables.
                Cucurbits.
ABS. JOUR.   :  RZhBiol., No. 1, 1959, No. 1652

AUTHOR       :  Kukharevskiy, G.V.; Pivovarov, L.R.;Yorchuk, I.
INST.        :  Kharkov University
TITLE        :  The Effectiveness of Humus Fertilizers under Potato and
                Vegetables in the South of the Ukrainian Socialist Soviet*

ORIG. PUB.   :  V sb.: Guminovyye udobreniya. Khar'kov, Khar'kov.
                un-t, 1957

ABSTRACT     :  The effectiveness of humus fertilizers- humophos and
                sodium humate- was checked in the year 1954 and 1955 on
                poor     sandy and chestnut soils in the southern part
                of the Ukrainian Socialist Soviet Republic.In 6 experi-
                ments with potato, the yield boost from humophos
                in broadcasting dose was 10 cwt/ha, for the us-
                ual 50g  average 30-40%. When broadcasting
                    a similar effect was obtained only from 100 cent-
                ners/hectare of compost .The latter in equal doses
                with humophos in a single introduction acted much weaker.

CARD:           1/2


             *  Republic

*YARCHUK, I. I.*

USSR / Soil Science.  Organic Fertilizers.                    J

Abs Jour: Ref Zhur-Biol., No 21, 1958, 95758.

Author   : Kuz'ko, F. S., ~~Yarchuk, I. I.,~~ Dem'yanenko, V. D.
Inst     : Kharkov University.
Title    : Experiment in the Use of Humic Fertilizers in
           Khersonskaya Oblast.

Orig Pub: V. sb.: Guminovye udobreniya, Khar'kov, Khar'kovsk.
          un-t, 1957, 277-284.

Abstract: In 1954 and 1955 in Khersonskaya Oblast, under
          production conditions, broad tests (carried out
          on chestnut, sandy and calyey soils) of the ef-
          fect of humophos during local application under
          potatoes, cabbage seedlings and other vegetables
          from a calculation of 40-50 g per patch (8-10 c/ha)
          showed its high effectiveness under conditions of
          good agricultural engineering. -- O. P. Mikhaylova.


Card 1/1

J

USSR / Soil Science. Organic Fertilizers.

Abs Jour : Ref Zhur - Biologiya, No 11, 1958, No. 48666

Author : Khristeva, L. A.; Yarchuk, I. I.; Kotlyuba, V. G.

Inst : Kherson Agricultural Institute

Title : Agricultural Principles in the Technology of Humus Fertilization

Orig Pub : Nauchn. zap. Khersonsk. s.-kh. in-t, 1957, vyp. 6, 83-102

Abstract : In a large number of experiments conducted during the course of several years, the dose significance of humic acids and humus ferti- lizers on crop harvests was investigated; also studied were problems connected with the manu- facture and application of soluble humates and organic-mineral humus as fertilizers. Of all

Card 1/3

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USSR / Soil Science.   Organic Fertilizers.

Abs Jour    : Ref Zhur - Biologiya, No 11, 1958, No. 48666    J

the tried production methods of humus fertiliza-
tion, the method most effective was the one
that yielded sodium salt of the humate by way
of saturating peat with a 3% NaOH solution
full water capacity with subsequent boiling
water (1 : 10) for one hour at the places where
this was to be used.  In this way, from 1 kg.
of peat, 10 liters of a 1% solution of humic
acid is obtained; it is added to irrigation water
in a concentration of 0.001%.  In experiments
conducted by the authors, sodium humate increas-
ed the vegetable harvest by 20%; the cost of
100 kg. of humate amounted to 14 roubles and
73 copecks, i.e., 7 rouble and 30 copecks per
hectare.  Organic-mineral humus fertilizers were
prepared by way of working up 100 kg. crumb

Card 2/3

USSR / Soil Science.   Organic Fertilizers.

Abs Jour    : Ref Zhur - Biologiya, No 11, 1958, No. 48666    J

peat with 4-5 liters of 24% $NH_4OH$ solution and
a water extract from 36 kg. of superphosphate
or ortho-phosphoric acid.  The cost of 1 ton
of fertilizer amounted to 50 roubles; this
fertilizer, in experiments conducted by the
authors, gave a significantly greater increase
in the harvest of agricultural plants than the
equivalent amount of nitrogen-phosphorus in
the form of mineral fertilizers.  In the sphere
of raw materials for the production of humus
fertilizers, weathered stone coal, brown coal
and carbonaceous shales can also be used. --
B. P. Pleshkov

Card 3/3

USSR/Cultivated Plants - Potatoes, Vegetables, Melons.          M-3

Abs Jour   :  Ref Zhur - Biol., No 3, 1958, 10806

Author     :  Kukharevskiy, G.V., Yarchuk, I.I., Pivovarov, L.P.

Inst       :  Kherson Agricultural Institute.

Title      :  Humic Fertilizers as a Factor in Raising the Productivity
              of Vegetables and Potatoes.

Orig Pub   :  Nauchn. zap. Khersonsk. s.-kh. in-ta, 1957, No 6, 119-
              124.

Abstract   :  Under Khersonskaya oblast' conditions sodium humate and
              humophosphorous /?? gumofos/ were tested on potato, cabba-
              ge, and tomatoes and compared with humus, peat, and NPK.
              The results are also given of experiments with humophos-
              phorous in the kolkhozes of the oblast'. Yield increase
              from using humic fertilizers are either so minimal as to
              be within the limits of error of the experiment or they
              were achieved with very low harvests.

Card 1/1

/ 3

YARCHUK,I.I., Cand Agr Sci—(diss) "~~Fertility~~ *Fertility (of the)* lower Dnepr sands and

fertilization as a factor of increasing their productivity." Dnepro-

petrovsk, 1958. 17 pp (Min of Agr USSR.   Odessa Agr Inst), 150 copies.

List of author's works at end of text (11 titles)  (KL,49-58,126)

-77-

IARCHUK, I.I., kand. sel'skokhoz. nauk

Technological methods for the production of peat-mineral ammonia
humus fertilizers.  Torf. prom. 39 no.6:9-13 '62.

(MIRA 16:7)

1. Dnepropetrovskiy sel'skokhozyaystvennyy institut.
        (Fertilizers and manures)      (Peat)

YARCHUK, I.I., kand. sel'skokhoz. nauk; AZANOV, A.G.

Effect of ammonia water on the active life of micro-organisms.
Torf. prom. 40 no.6:23-27  '63.                    (MIRA 16:10)

1. Dnepropetrovskiy sel'skokhozyaystvennyy institut.

YARCHUK, N.I.

Late functional results of radical uranoplasty. Trudy Len.gos.
nauch.-issl.inst.travm.i ortop.  no.7:273-278 '58.
(MIRA 13:6)

1. Iz chelyustno-litsevogo otdeleniya Leningradskogo gosudarst-
vennogo nauchno-issledovatel'skogo instituta travmatologii i
ortopedii.
(PALATE--SURGERY)

2089. A TWO-STAGE METHOD OF GRAFTING THE EXTERNAL EAR IN ITS DE-
FECT (Russian text) - Yarchuk N. I. Leningrad - VESTN. OTO-RINO-
LARING. 1958, 20/1 (25-27) Illus. 3

A two-stage method of grafting an external ear is presented. In order to graft the
cartilaginous skeleton, free grafting of comminuted cartilage implanted into soft
tissues by a revolver syringe was employed (the first stage). The skin and the
subcutaneous cellular tissue with the cartilaginous skeleton are separated through
an incision up to the auditory canal, fringing the contours of the future external
ear. Two grafts are freely implanted into the two similar wound surfaces: one on
the head and one on the interior surface of the pinna (second stage).

(XI, 19)

**3744. A LONG-LASTING FOLLOW-UP OF FACE HOMOGENEOUS CARTILAGE GRAFT** (Russian text) - Yarchuk N. I.   - VESTN. KHIR. 1958, 81/10 (62-64)

Nineteen patients grafted with homogeneous cartilage stored by Mihelson's method were re-examined after a 3- to 10-year interval. In 18 patients out of this number the transferred cartilage was found to be intact, its size, outline and position remaining unchanged. In 2 years' time in only one young girl the graft underwent a total desintegration; this homogeneous cartilage had been sterilized by boiling (as an exception). After 8-9 years' time the cartilage that had to be excised in supplementary operations was found to preserve its usual gross aspect and its elasticity and could be easily cut through with a knife.

YARCHUK N. I.

EXCERPTA MEDICA Sec 9 Vol 13/11   Surgery   Nov  59

6554. NEW SUPPLEMENTARY SURGICAL MANOEUVRES IN RADICAL URANO-
PLASTY (Russian text) - Yarchuk N. I. - VESTN. KHIR. 1958, 81/12
(93-99) Illus. 7

The author presents the 3 following methods used in radical uranoplasty: (1) A free
skin graft to the nasal surface of the palatal folds. (2) A free skin graft into the
interlaminary region of an osteotomy. (3) Radical uranoplasty with a simultaneous
pendulum skin graft. Operational techniques are given in detail. The author applied
the first method to 60 patients, with good results, the second to 10 patients and the
third to 3.
                                                    Zakrys - Lublin (IX, 19*)

YARCHUK, N. I.

Free skin grafting in the face with standardized pressure. Acta chir. plast. 3 no.4:250-255 '61.

1. Maxillofacial Department Leningrad Scientific Research Institute for Traumatology and Orthopaedics, Leningrad (U.S.S.R.) Director: Prof. V. S. Balakina.

(FACE surg)    (SKIN TRANSPLANTATION)

YARCHUK, N. I., kand. med. nauk (Leningrad, ul. Tipanova, d. 3, kv. 97)

Planning dermatoplastic operations on the head. Vest. khir.
no.4:75-78 '62.                                      (MIRA 15:4)

1. Iz kliniki chelyustno-litsevoy khirurgii (zav. - prof. A. A.
Limberg) Leningradskogo instituta usovershenstvovaniya vrachey
im. S. M. Kirova na baze Leningradskogo nauchno-issledovatel'-
skogo instituta travmatologii i ortopedii.

(SKIN—TRANSPLANTATION)   (HEAD—SURGERY)

YARCHUK, N. I., kand. med. nauk

New method for forming the concha auriculae. Vest. otorin. no.1:
37-40 '62.                                (MIRA 15:7)

1. Iz kafedry chlyustno-litsevoy khirurgii (zav. - chlen-kor-
respondent AMN SSSR prof. A. A. Limberg) Instituta usover-
shenstvovaniya vrachey imeni S. M. Kirova i Nauchno-issledo-
vatel'skogo instituta travmatologii i ortopedii (dir. - prof.
V. S. Balkina), Leningrad.

(EAR—SURGERY)

YARCHUK, N.I.

Reconstruction of the auricle in large defects after mechanical injury. Acta chir. plast. (Praha) 7 no.4:249-256 '65.

1. Department of Faciomaxillary Srugery of the Kirov Postgraduate Medical School (Director: Prof. A.A. Limberg) Faciomaxillary Unit of Leningrad Institute of Traumatology and Orthopaedics Leningrad USSR.

YARCHUK, T.A. --

"Local Corn Varities of the USSR and a Comparative study of Them in Krasnodarskiy Kray." Cand Agr Sci, All-Union Inst of Plant Husbandry, VASKHNIL, Leningrad, 1953. (RZhBiol, No 3, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum. No. 481, 5 May 55

(HRUSHEVICH, G. U.

1. G. O. YARDSHEVICH

2. USSR (600)

4. Arches

7. Investigating the stability of compressed bent arches.  Inzh. sbor. 13.  1952.

9. Monthly List of Russian Accessions, Library of Congress, ____April____ 1953, Uncl.

YARDZHANOV, A.

Brief characterization of the composition of the Paleozoic and
Mesozoic sediments of the Corvaza region. Trudy Turk. fil.
VNII Part C no.6:43-49 '63                    (MIRA 17:7)

SEMKIV, V.I.; YARDZHANOV, A.

Stratigraphy and lithology of the Lower Cretaceous sediments
in the Farab region. Trudy Turk. fil. VNII Part C no.6:29-33
'63.                                              (MIRA 17:7)

YAREMA, A.A.; POGREBNYAK, L.P.[Pohrebniak, L.P.]; KUZNETSO\A,
A.S., red.

[Russian-Ukrainian veterinary dictionary. 12,000 terms]
Rosiis'ko-ukrains'kyi veterynarnyi slovnyk.  12 000 ter-
miniv.  Kyiv, Naukova dumka, 1964.  380 p. (MIRA 18:1)

KICHIGIN, A.F., dotsent; IGNATOV, S.N., inzh.; VASILEVSKIY, V.V., inzh.
SALTANOV, A.D., inzh.; YAREMA, A.D., kand.tekhn.nauk

Energy indices of rock breaking in diamond cutters of rock
working cutter loaders, operating according to the principle
of breaking away rock from the massif. Izv.vys.ucheb.zav.;
gor.zhur. 8 no.11:94-96 '65. (MIRA 19:1)

1. Karagandinskiy politekhnicheskiy institut. Rekomendovana
kafedroy gornykh mashin i rudnichnogo transporta. Submitted
October 26, 1964.

KHASDAN, Samuil Mordukhovich; YAREMA, Galina Sergeyevna; OBRAZTSOV,
S.A., red.; LEBEDEVA, I.D., red.izd-va; BACHURINA, A.M.,
tekhn. red.

[Mechanical milling of wood in foreign countries] Mekha-
nicheskaia obrabotka drevesiny za rubezhom. Moskva, Gos-
lesbumizdat, 1963. 126 p.                      (MIRA 17:3)

RUBANIK, V.P.; YAREMA, P.F.

      Forced synchronization of a self-excited oscillator with delayed
      feedback. Izv. vys. ucheb. zav.; radiofiz. 7 no.5:914-925 '64.
                                     (MIRA 18:2)
      1. Chernovitskiy gosudarstvennyy universitet.

PANASYUK,V.V.; PODSTRIGACH,Ya.S.; YAREMA,S.Ya.

   Thermal stresses in a cylindrical shell.  Dop. AN URSR no.3:231-
   234 '55.                                            (MIRA 8:11)

   1. Institut mashinoznavstva ta avtomatiki Akademii nauk URSR.
   Predstaviv diysniy chlen Akademii nauk URSR G.M.Savin
              (Elastic plates and shells)

SOV/124-57-8-9292

AUTHORS:    Panasyuk, V. V., Podstrigach, Ya. S., Yarema, S. Ya.

TITLE:      Temperature Stresses in the Walls of High-pressure Boiler Shells
            (Temperaturnyye napryazheniya v stenkakh barabanov kotlov
            vysokogo davleniya)

ABSTRACT:    With periodic shut-downs during the process of operation the shells
             of high-pressure boilers are subjected to uneven heating, which creates
             temperature stresses in the shell walls.  The paper presents an ac-
             count of a theoretical as well as experimental investigation of the ther-
             mal stresses in the walls of a freely-supported cylindrical shell under
             the condition that the temperature varies only along the contour of a
             cross section in accordance with the law $t = t(s)$ (where s is the arc
             of the contour) and remains constant along both the generatrix and the
             wall thickness.  The paper provides a numerical example of the calcu-
             lation for temperature stresses.  An account is also given of an experi-
Card 1/2     mental investigation with respect to the determination of the

SOV/124 57-8-9292

Temperature Stresses in the Walls of High-Pressure Boiler Shells

temperature field in the wall of a shell and of the determination of the elastic strains.
The elastic strains were measured by wire resistance strain gages included in a
bridge circuit. The paper compares the calculated results with those of the experi-
mental investigations.

V. I. Danilo-skaya

Card 2/2

SOV/124-57-3 9775

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 8, p 162 (USSR)

AUTHOR:      Yarema, S. Ya.

TITLE:       The Measurement of Temperature Stresses With Wire Resistance
             Strain Gages (Izmereniye temperaturnykh napryazheniy provolochnymi
             datchikami soprotivleniya)

PERIODICAL:  Nauch. zap. In-ta mashinoved. i avtomatiki AN UkrSSR, 1956,
             Vol 5, pp 25-40

ABSTRACT:    The paper analyzes the performance of wire resistance strain gages
             at elevated temperatures (200°C). The question of temperature stabil-
             ity attained by aging the strain gages at 150° - 170° for a period of 30
             days and repeated heating to 180° - 200° followed by slow cooling is
             analyzed in detail. The thermal treatment leads to leveling off of the
             temperature coefficients of the strain gages within the limits of ±2%
             and to a hysteresis in the gage readings of not over 3% during heating
             and cooling. The temperature stresses are measured by means of wire
             resistance strain gages glued onto the artifact being tested (the active
             unit) as well as onto a plate of the same metal (a compensation unit);
Card 1/2     for the purpose of equalizing the temperatures of the plate and the

SOV/124-57-8-9775

.The Measurement of Temperature Stresses With Wire Resistance Strain Gages

artifact a layer of paper is placed between the active unit and the plate carrying the compensation unit and the two units are pressed together. The unbalance of the bridge resulting from the presence of the temperature stresses in the artifact is a function of the value of the stress. The bridge method with D-C feed is employed for measuring the stresses. Temperature corrections during the experimental investigation amounted to 20 $kg/cm^2$ per $1°$ of the difference between the surface temperatures of the artifact and the compensation plate. The influence of the thermo-electromotive force on the measurements was taken into account by taking the readings at different polarities of the bridge-feeding potential. The paper offers practical suggestions for fabricating the strain gages and for carrying out the experiments.

V. N. Maksimov

Card 2/2

YAREMA, S. Ya.

SOV/124-58-5-6114 D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 155 (USSR)

AUTHOR:    Yarema, S.Ya.

TITLE:    Heat Stresses in the Shells of High-pressure Boilers (Temper-
aturnyye napryazheniya v barabanakh kotlov vysokogo dav-
leniya)

ABSTRACT:    Bibliographic entry on the author's dissertation for the de-
gree of Candidate of Technical Sciences, presented to the In-t
stroit. mekhan. AN UkrSSR (Institute of Structural Mechanics,
Academy of Sciences, Ukrainian SSR), Kiyev, 1957

ASSOCIATION:  In-t stroit. mekhan. AN Ukr SSR (Institute of Structural
Mechanics, Academy of Sciences, Ukrainian SSR), Kiyev

1. Boilers--Thermal stresses

Card 1/1

AUTHORS:       Yarema, S.Ya. (Eng.) and Vnukov, A.K. (Eng.)           256
               (Southern Division of ORGRES).

TITLE:         On the question of the strength of boiler drums during
               starting and stopping. (K voprosu prochnosti barabanov
               kotlov pri puske i ostanovke).

PERIODICAL:    "Teploenergetika" (Thermal Power), Vol.4, No.4, April,
                       1957, pp. 33 - 36 (U.S.S.R.)

ABSTRACT:          According to existing standards in calculating the
               strength of boilers, temperature stresses that arise in
               the boiler walls during periods of starting up and
               shutting down are not taken into account. In operation
               the magnitude of the temperature stresses is limited by
               the permitted temperature differences. According to
               Soviet and some foreign standards the temperature
               difference between any two points in the drum should not
               exceed 30 to 50°C. This article gives an evaluation of
               the magnitude of temperature stresses and their influence
               on the total stresses in the cylindrical part of the
               drum. Measurements carried out whilst steam was being
               raised in boilers showed that the temperature field on
               the outside of the drum can be represented by a simple
               diagram. The temperature of the walls above water level
               practically coincides with the saturation temperature of
               the steam with which they are in contact and is thus
               uniform over the entire surface. Starting at the water
               surface and below, the drum wall temperature decreases

On the question of the strength of boiler drums during 256
starting and stopping. (Cont.)

linearly and in the lower part of the drum the water
temperature is again constant. This simplified diagram
is shown to be in good agreement with practical
measurements. Analysis of the solution of problems on
temperature stresses in the cylindrical part of a drum
shows that in the middle of the drum the normal stress
acting in an axial direction preponderates over the
tangential and radial stresses. A formula is given for
this stress but it is applicable only to the middle part
of the drum. The simplified diagram of the temperature
field is then applied to this formula to give an
evaluation of the normal stress which is plotted as a
function of the position on the drum. Analysis of the
equations shows that the maximum stresses occur at the
inflection points in the temperature distribution and
the corresponding values are substituted in the
expression for the stress. The absolute values for the
temperature stresses corresponding to measured temperature
distributions are tabulated. In individual cases the
stresses reach the designed values. The stress due to
the internal steam pressure must be added to the internal
temperature stress and an expression is obtained for
their sum. Finally, an expression is derived for the
permissible temperature difference between two points on

On the question of the strength of boiler drums during 256
starting and stopping. (Cont.)

the drum with a given configuration of temperature field
and safety factor.  The equation is solved and the
results are plotted on a graph, which is applicable to
the drum of a boiler TP-170.  With a safety factor of
1.65 the safe temperature difference at the commencement
of firing may be 113°C.  At the instant of connecting
to the steam main (90 atm.) the temperature difference
should not be greater than 85°C.  With a safety factor
of 1.11 the temperature difference at the start of
firing is practically unlimited and at the end should
not exceed 148°C.  The temperature difference of 50°C
permitted in certain standards corresponds to a safety
factor 1.93 at a pressure of 100 atm. and of 3.68 at
a pressure of 10 atm.  The calculated results were
verified by tests on a model of a boiler drum which is
described.  The surface temperatures of the model were
measured with thermocouples and the stresses by
resistance strain gauges.  The temperature distribution
on the circumference of the model is plotted alongside
a curve obtained on a high pressure boiler drum.  The
distribution of axial thermal stresses in the model
are plotted, the normal stresses measured along an arc
in the middle part of the drum were quite small and are
not shown in the graph.  Results calculated from the

On the question of the strength of boiler drums during 256
starting and stopping. (Cont.)

temperature field of the model are plotted on the same
graph.  Good agreement is shown.  7 figures, 2
literature references (2 Russian).

YAREMA, S.Ya.

The temperature problem in the theory of shells.  Nauch.zap.IMA
AN URSR. Ser.mashinoved. 6 no.5:50-59 '57.          (MLRA 10:7)
          (Temperature)   (Elastic plates and shells)

YAREMA, S. Ya

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 4, p 156 (USSR)

AUTHOR:    Yarema, S. Ya.

TITLE:    Temperature-stress Analysis of the Cylindrical Part of a Boiler Shell (Analiz temperaturnykh napryazheniy v tsilindricheskoy chasti barabana kotla)

PERIODICAL:    Nauchn. zap. In-ta mashinoved. i avtomatiki. AN UkrSSR. 1957, Vol 6, pp 60-74

ABSTRACT:    A problem of heat stresses in the cylindrical wall of a boiler shell is investigated. The temperature variations along the circumference vary according to the following law:

$$t(\vartheta) = t_0 + \sum_{n=1}^{m} t_n \cos n\vartheta.$$

On the basis of solution given by Panasyuk, V. V., Podstrigach, Ya. S., and Yarema, S. Ya. [Sb.: Voprosy mashinovedeniya i prochnosti v mashinostroyenii (Problems of Machine Design and Strength in Machine Construction)AN UkrSSR, 1956, Vol 5, Nr 4] it is established that at some distance from the end faces

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Temperature-stress Analysis of the Cylindrical Part (cont.)

of the shell the stress condition is characterized mainly by the axial stress $\sigma_x$ for which an approximate formula is proposed

$$\sigma_x = -\alpha E \left[ t - (t_o + t_1 \cos \vartheta) \right]$$

Applying this formula to the design calculation of boilers in service according to experimentally-obtained temperature fields the author concludes that there is a possibility of increasing the temperature spread allowed by the existing standards between the top and bottom generatrices of the drum. Some recommendations on the choice of starting and stopping procedures for boilers are presented.

V. I. Rozenblvum

1. Boilers--Thermal stresses   2. Stress analysis  3. Mathematics

Card 2/2

YAREMA, S. YA.

PHASE I BOOK EXPLOITATION          SOV/4383

Akademiya nauk URSR. Instytut mashynoznavstva ta avtomatyky

Temperaturni napruzhennya v tonkostinnykh konstruktsiyakh (Thermal Stresses in Thin-Walled Structures) Kyyiv, 1959. 173 p. Errata slip inserted. 1,000 copies printed.

Resp. Ed.: M. Ya. Leonov, Doctor of Physics and Mathematics, Professor; Ed. of Publishing House: N. M. Labinova; Tech. Ed.: T. Ya. Mazuryk.

PURPOSE: This collection of articles is intended for technical personnel in the machine industry.

COVERAGE: These articles deal mainly with analyses of temperature fields and thermal stresses in shells and plates. Experimental methods of investigation of the state of stress in machine parts under nonuniformly distributed temperatures are described. No personalities are mentioned. References accompany each article.

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Thermal Stresses in Thin-Walled Structures

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Card 2/5

Thermal Stresses in Thin-Walled Structures                    SOV/4383

    differences in the barrel based on stress analysis is
    also discussed.

Podstrigach, Ya. S.  Temperature Field in Walls of Constant
Thickness Under an Asymptotic Thermal Régime                           109
    The author presents a method for determining the
    temperature field under an asymptotic thermal régime for
    the case when the boundary temperature values can be
    presented as polynomials with time.  He also gives
    examples of the temperature distribution across the
    thickness of plane, cylindrical, and spherical walls.

Podstrigach, Ya. S., and G.V. Plyatsko.  State of Stress in a
Strip Under Uniform Heating of One of Its Edges                         123
    The author presents a solution for the problem of the
    thermoelasticity of an unrestrained long strip with a width
    considerably exceeding its thickness.  The temperature field
    and the state of stress in the strip are determined for
    conditions of an asymptotic thermal régime.  He also discusses

Card 3/5

YAREMA, S.Ya.

Results of refined calculation of the stressed state of boiler drums at start-up and shut-down. Nauch.dokl.vys.shkoly; energ. no.2:293-301 '59.                                    (MIRA 13:1)

1. Institut mashinovedeniya i avtomatiki AN USSR.
        (Boilers)

84836

S/021/60/000/006/004/019
A153/A029

*11.9100* *also* *3716*

AUTHORS:     Leonov, M.Ya.; Yarema, S.Ya.

TITLE:       Thermal Stress Distribution in the Shell Bulk

PERIODICAL:  Dopovidi Akademiyi nauk Ukrayins'koyi RSR, 1960, Nr. 6, pp. 751 -
             754

TEXT:        The authors give a solution of the heat conductivity equation

$$\frac{\partial^2 t}{\partial z^2} = \frac{1}{a}\frac{\partial t}{\partial \tau} \quad , \tag{1}$$

(where a is the temperature conductivity coefficient, $\tau$ is the time, z is the point coordinate in the bulk, counting from the middle surface of the plate), for an infinite plate at a given initial temperature distribution and the boundary conditions linearly variable in time

$$t\,(\tau,\,z)|_{z=\delta} = b_1\tau + t\,(0,\delta),$$

$$t\,(\tau,z)|_{z=\delta} = b_2\tau + t\,(0,-\delta), \tag{2}$$

The solution (3) is simplified by neglecting the members that damp during an interval of several $\frac{\delta^2}{a}$ (where $2\delta$ is the plate thickness and t (0, z) is the given

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Thermal Stress Distribution in the Shell Bulk

temperature distribution when $\tau = 0$), and its application is extended to <u>thin</u> <u>shells</u> in the case when the surface temperature is a given function of time and space coordinates. The conditions for the applicability of the resulting formula

$$t \, (\tau, \, z, \, x_1, \, x_2) = \frac{\delta^2}{2a} \left( \frac{\bar{p}}{3\delta^3} z^3 + \frac{\bar{q}}{\delta^2} z^2 - \frac{\bar{p}}{3\delta} z - \bar{q} \right) + \frac{r}{\delta} z + s, \tag{5}$$

where $2\bar{p} = \frac{\partial t}{\partial \tau}\big|_{z=\delta} - \frac{\partial t}{\partial \tau}\big|_{z=-\delta}, \quad 2\bar{q} = \frac{\partial t}{\partial \tau}\big|_{z=\delta} + \frac{\partial t}{\partial \tau}\big|_{z=-\delta},$

($x_1$, $x_2$ are curvilinear systems of coordinates on the shell surface) are indicated. On the basis of formula (5) expressions (9) are given for temperature terms in the initial system of equations (6) of the shell theory, and the law of thermal stress distribution in the shell bulk is derived. There is 1 Soviet reference.

ASSOCIATION: Instytut mashynoznavstva ta avtomatyky AN UkrSSR (Institute of Science of Machines and Automation of the AS UkrSSR)

PRESENTED: by H.M. Savin, Academician, AS UkrSSR
SUBMITTED: June 17, 1959

Card 2/2

KARPENKO, G.V., otv. red.; LEONOV, M.Ya., doktor fis.-mat. nauk, zam.
otv. red.; KRIPYAKEVICH, R.I., kand. tekhn. nauk, red.;
MAKSIMOVICH, G.G., kand. tekhn. nauk, red.; PANASYUK, V.V.,
kand. fiz.-mat. nauk, red.; PODSTRIGACH, Ya.S., kand. fiz.-
mat. nauk, red.; STEPURENKO, V.T., kand. tekhn. nauk, red.;
TYNNYY, A.A., kand. tekhn. nauk, red.; CHAYEVSKIY, M.I., kand.
tekhn. nauk, red.; YAREMA, S.Ya., kand. tekhn. nauk, red.;
REMENNIK, T.K., red. izd-va; LISOVETS, A.M., tekhn. red.

[Machines and devices for testing metals] Mashiny i pribory dlia
ispytanii metallov.  Kiev, Izd-vo Akad.nauk USSR, 1961.  132 p.
(MIRA 15:2)

1. Akademiya nauk URSR, Kiev. Instytut mashinoznavstva i avtoma-
tyky. 2. Chlen-korrespondent Akad. nauk USSR(for Karpenko).
(Testing machines)

YARMEA, S. YA.

YAREMA, S. YA.

PHASE I BOOK EXPLOITATION        SOV/6091

Pidstrygach, Yaroslav Stepanovich, and Stepan Yakymovych Yarmea

Temperaturni napruzhennya v obolonkakh (Thermal Stresses in Shells). Kyyiv, Vyd-vo AN UkrRSR, 1961.   211 p.  450 copies printed.

Sponsoring Agency:  Akademiya nauk Ukrayins'koyi RSR.   Instytut mashynoznavstva i avtomatyky.

Executive Ed.:   M. Ya. Leonov, Doctor of Physics and Mathematics; Ed. of Publishing House:   T. S. Mel'nyk; Tech. Ed.:   O. M. Lysovets'.

PURPOSE:  This book is intended for workers at scientific research institutes, engineers, and engineering students concerned with strength of materials.

COVERAGE:  The book is written in two parts.  Part I, by Ya. S. Pidstrygach, systematically presents the fundamentals of thermal problems of the linear theory of shells (basic concepts of the

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Thermal Stresses in Shells                                    SOV/6091

theory of surfaces and thermoelasticity, basic deformation equa-
tions, and theories of heat conductivity and stress-strain rela-
tions in shells). Part II, by S. Ya. Yarema, discusses tempera-
ture problems in a circular cylindrical shell in detail and gives methods
for the approximate analysis of the stress-strain state caused
by certain temperature fields. The authors thank Professor M. P.
Sheremet'yev, Academician A. D. Kovalenko and M. O. Kil'chev'skiy,
Corresponding Member of the Academy of Sciences Ukrainian SSR,
I. P. Motovylovets', Candidate of Physics and Mathematics, and
G. O. Kil'chyns'ka. There are 37 references: 36 Soviet (in-
cluding 2 translations) and 1 Polish.

TABLE OF CONTENTS:

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SHEREMET'YEV, M.P.; YAREMA, S.Ya.; KHLEBNIKOV, D.G.

Selecting the optimum shape for a circular metal-glass kinescope.
Nauch.zap.IMA AN URSR. Ser.mashinoved.  7  no.7:96-109  '61.
(MIRA 15:1)

(Television--Apparatus and supplies)

YAREMA, S.Ya.

Investigating the characteristic equation corresponding to the
resolving equation of a cylindrical shell. Nauch.zap.IMA AN URSR.
Ser.mashinoved. 7 no.7:110-118 '61.                    (MIRA 15:1)
    (Elastic plates and shells) (Differential equations)

42176
S/813/62/000/001/002/008
E193/E383

10.8100

AUTHORS:   Kornilov, G.I. and Yarema, S.Ya.

TITLE:   Flat test pieces with crack-like stress concentrators for experimental study of plasticity bands

SOURCE:   Akademiya nauk Ukrayins'koyi RSR.   Instytut mashynozavstva i avtomatyky, L'viv.   Voprosy mekhaniki real'nogo tverdogo tela.   no. 1.   Kiev, 1962, 29-36

TEXT:   The object of the present investigation was to study the initial, highly localized stage of plastic deformation.   The better to observe the formation of the first slip bands and subsequent spreading of the zone of plastic deformation, flat test pieces with stress risers were used.   The test pieces were 350 mm long and 200 mm wide, their thickness ranging from 0.7 to 2.5 mm.   The stress risers were in the form of a very narrow (not more than several hundredths of a mm wide) slit, cut (by a method whose detailed description is given) in the centre of the test piece symmetrically and at a right angle to its longer axis which was also the axis of loading.   The length of the slits, which terminated at each end in a narrow wedge-like hair crack, ranged

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Flat test pieces ....

from 8 - 25 mm. Test pieces of various steels with yield points ranging from 18 - 32 kg/mm$^2$ were studied; before each test they were normalized and polished by the usual metallographic techniques. The formation of slip bands was observed directly after the tensile tests. To facilitate comparison of the results obtained on various types of steels, the state of stress was described by a dimensionless parameter $\varkappa = \sigma_H/\sigma_T$, where $\sigma_H$ is the nominal stress in the plane of the stress riser and $\sigma_T$ is the yield point of the alloy tested. The results of visual examination only are reported in the present paper. The general conclusion reached was that the process of plastic deformation under the conditions employed consisted of several stages: 1) the incubation period (without visible indication of plastic deformation) extending in the range of $\varkappa < 0.45$; 2) nucleation and growth of horizontal slip bands starting at the ends of the stress riser; this process takes place at $\varkappa \geqslant 0.45 \leqslant 0.85$; 3) appearance of another system of slip bands starting at the ends of the stress riser and inclined to the horizontal at 50 - 55°; both the horizontal and inclined slip bands grow

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Flat test pieces ....

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during this stage, reaching ultimately the edges of the test piece; 4) appearance of a large number of both horizontal and oblique slip bands which broaden and coalesce to form zones of plastic deformation at almost constant load ($\varkappa > 0.9$); 5) growth of cracks and loss of transverse stability of the test piece at a decreasing load, followed by fracture. There are 10 figures.

SUBMITTED:     June 1, 1961

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